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Matthew J. Sampson
McDonnell Boehnen Hulbert & Berghoff
32nd Floor
300 S. Wacker Drive
Chicago, IL 60606

EXAMINER
OPSASNICK, MICHAEL N

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte BRENT TOWNSHEND
and
JARED BERNSTEIN

_____

Appeal 2009-0856
Application 10/087,651
Technology Center 2600

_____

Decided:[1] February 12, 2009

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Before KENNETH W. HAIRSTON, JOHN A. JEFFERY,
and THOMAS S. HAHN, *Administrative Patent Judges.*

HAHN, *Administrative Patent Judge.*

DECISION ON APPEAL

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[1] The two-month time period for filing an appeal or commencing a civil
action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date
shown on this page of the decision. The time period does not run from the
Mail Date (paper delivery) or Notification Date (electronic delivery).

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejections of claims 1, 2, 4-24, 26, 28, 29, 32-38, and 40-45. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants invented a system and method for measuring human speaker intelligibility. The invention includes: (1) having a speaker orally recite information from a list of items, e.g., words or sentences of varying lengths and complexity; (2) having a listener hear the speaker and orally repeat what the listener heard the speaker say, (3) automatically transcribing what the listener repeats; (4) automatically comparing the information on the list of items with the transcription; and (5) measuring intelligibility based on this comparison.[2] Claim 1 is illustrative:

> 1. An intelligibility measurement system, comprising in combination:
>
> a human listener that hears a speaker who is repeating items and repeats aloud what is heard, wherein the listener does not know a text of the items the speaker repeated prior to hearing the speaker repeating the items;
>
> a means for automatically preparing a transcription of what the listener repeats;
>
> a means for automatically comparing the text of the items with the transcription; and
>
> a means for measuring intelligibility coupled to the comparing means.

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[2] *See generally* Spec. 5:2-8:15; Fig. 1.

The Examiner relies upon the following prior art references to show unpatentability:

Baker	US 4,783,803	Nov. 08, 1988
Lewis	US 5,059,127	Oct. 22, 1991
Rtischev	US 5,634,086	May 27, 1997
Kahn	US 6,122,614	Sep. 19, 2000

1. Claims 1, 2, 4-8, 11-18, 24, 26, 28, 29, 32, 33, 36, 37, 42, 44, and 45 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rtischev, Kahn, and Baker (Ans. 4-7).

2. Claims 9, 10, 19-23, 34, 35, 38, 40, 41, and 43 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rtischev, Kahn, Baker, and Lewis (Ans. 7-8).

Rather than repeat the arguments of Appellants or of the Examiner, we refer to the Briefs and the Answer[3] for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments that Appellants could have made but did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

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[3] Throughout this opinion, we refer to the (1) Appeal Brief filed Aug. 13, 2007, (2) the Examiner's Answer mailed Nov. 27, 2007, and (3) Reply Brief filed Jan. 28, 2008.

Appellants Arguments

Obviousness Rejection Based on Rtischev, Kahn, and Baker

Appellants do not separately argue the rejected claims, but, instead, collectively address the rejected independent claims, i.e., claims 1, 11, 24, 36, and 45,[4] by asserting that "Rtischev, nor Kahn, nor Baker teach or suggest" claimed subject matter (App. Br. 8-9). Appellants paraphrase limitations recited in the independent claims, without specifying a selected claim, and argue that the paraphrased limitations are not taught or suggested by the three references. The Appellants' paraphrased limitations are: "(i) a listener who hears a speaker speaking items and then repeats aloud what is heard; (ii) automatically preparing a transcription of what the listener repeats aloud; (iii) comparing the transcription of what the listener repeated aloud with a text of the items spoken by the speaker; or (iv) measuring intelligibility" (App. Br. 7-8). Since Appellants generally address independent claims, but do not separately argue the rejected claims, we select independent claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Obviousness Rejection Based on Rtischev, Kahn, Baker, and Lewis

Appellants again do not separately argue the rejected claims. Appellants merely repeat the arguments earlier directed to Rtischev, Kahn, and Baker, and assert that the combination of these three references "in no way undermines the allowability" of independent claim 21 or the dependent

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[4] Appellants list independent claim 21 with this first ground of rejection (App. Br. 7), but claim 21 is not a rejected claim in this group (Ans. 4). Therefore, we assume this is a typographical error, and address claim 21 below with the second § 103 rejection.

claims rejected over the combination of the three references with Lewis
(App. Br. 16).

ISSUE

Have Appellants shown that the Examiner erred in combining
the teachings of Rtischev, Kahn, and Baker to reject claims under
§ 103? This issue turns on whether the Examiner provides articulated
reasoning with some rational underpinning to justify the obviousness
conclusion based on the collective teachings of these references.

FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a
preponderance of the evidence:

1   Rtischev teaches a method and apparatus for spoken-language
         instruction that employs context-based speech recognition to
         instruct and evaluate a speaker's speaking performance, including
         language fluency evaluation (Rtischev, Abstract).

2.   Rtischev's system has a person read text aloud from a script and
         monitors selected parameters of the speech using speech
         recognition to compare the speaker's speech with a stored copy of
         the script, and provides a scoring system that analyzes speech and
         reading proficiency based on comparison of the speech with the
         stored script (Rtischev, col. 3, ll. 12-16 and 60-65; Fig. 3).

3.   Kahn teaches a system and method for automating preparation of
         transcriptions of speech from multiple human users, i.e., speakers,
         with the system including a comparison means along with means

5

for determining an accuracy rate between an automated prepared transcript and a manual prepared transcript used to check the accuracy of the automated transcription (Kahn, Abstract; col. 2, ll. 61-65, col. 10, ll. 38-44; Fig. 4).

4.   Kahn discloses having a "human transcriptionist (6)" first listen to an audio file recording created by a human "current user (5)" speaking, and then the "human transcriptionist (6)" manually prepares a transcription of the perceived contents of the audio file (Kahn, col. 8, ll. 19-28; Fig. 1 (reproduced below for reference)).
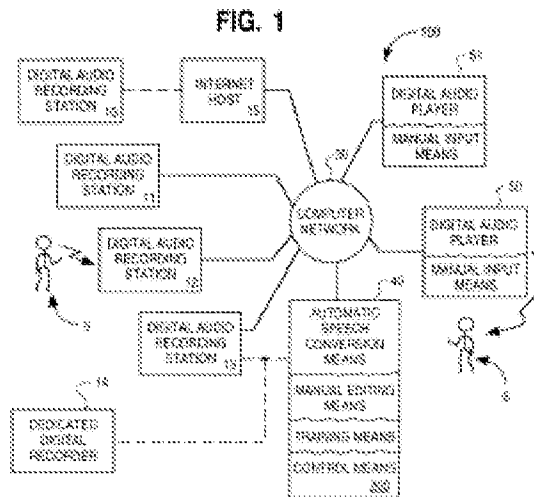
Kahn Figure 1 depicts a block diagram for a disclosed system to automate transcription of one or more voice users.

5.   Baker teaches an apparatus and method for automated transcription of input human speech by processing sequences of speech sounds that are identifiable as corresponding to specific words (Baker, col. 1, ll. 6-10 and 13-21).

6. Baker discloses that machines capable of automating transcription of human dictation "would greatly increase the speed and ease with which humans could communicate with computers, and greatly speed and ease the ability with which humans could record and organize their own words and thoughts" (Baker, col. 1, ll. 13-21).

PRINCIPLES OF LAW

An Examiner must establish a factual basis to support a legal conclusion of obviousness in rejecting claims under 35 U.S.C. § 103. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). The factual determinations that the Examiner must make are set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

To address obviousness questions involving combinations of known elements, the Supreme Court explains:

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida [v. AG Pro, Inc.*, 425 U.S. 273 (1976)] and *Anderson's-Black Rock [, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969)] are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

KSR Int'l v. Teleflex, Inc., 550 U.S. 398, 127 S. Ct. 1727, 1740 (2007).

If the claimed subject matter cannot be fairly characterized as involving the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness can be based on a showing that "there was an apparent reason to combine the known elements in the fashion claimed." *Id.* at 1740-41. Such a showing requires:

> 'some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness' . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

Id. at 1741 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (internal quotation marks omitted).

When the Examiner's burden is met there is a shift in the burden to the Appellants to overcome the Examiner's prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

ANALYSIS

Obviousness Rejection Based on Rtischev, Kahn, and Baker

Appellants argue that "[i]ntelligibility, as claimed, is distinct from 'speech recognition,' or a computer's understanding of speech, which is the focus of the cited art" (Reply Br. 2). To support this argument, Appellants refer to the Specification, namely, 2:20-3:2, and 3:7-12, and conclude that "a

human understanding speech is termed 'intelligibility' and is the focus of the
present invention, and a computer understanding speech is termed 'speech
recognition' and is the focus of much of the cited art" (App. Br. 8). We are
not persuaded by Appellants' arguments because no evidence for a
specialized definition known to ordinarily skilled artisans that excludes
machine speech recognition is submitted. Evidence and not attorney
arguments alone, is required in order to rebut a prima facie case of
obviousness.[5] We further are not persuaded that there are Specification
disclosures adequately supporting a specialized definition narrowed from the
broadest reasonable interpretation so as to distinguish claimed subject matter
over the cited prior art.[6] In particular, we note the Specification indicates
that "[i]ntelligibility *may be defined* as the degree to which others can
understand a person's speech" (Specification, 2:12-13; emphasis added).
This disclosure is open as to defining "intelligibility," and, therefore, does
not exclude other definitions. Nowhere in the Specification do we find
anything that would preclude interpreting the term "intelligibility" with its
ordinary and customary meaning so as to exclude machine speech
recognition.[7]

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[5] An attorney argument is not evidence unless it is an admission,
because "[a]n assertion of what seems to follow from common
experience is just attorney argument and not the kind of factual
evidence that is required to rebut a prima facie case of obviousness"
In re Geisler, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (citations
omitted).
[6] *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en
banc).
[7] *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Appellants further argue that the Examiner "improperly parse[d]" claim elements "[w]ithout demonstrating that the entirety of the element (i) is disclosed [in one reference], the Examiner's rejection cannot stand"[8] (Reply Br. 4-5). Appellants cite no authority to support this argument. The Supreme Court, though, has explained that: "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 127 S. Ct. at 1739. Appellants' assert, without evidence or argument, that a speaker and a listener are a singular element. The Examiner treats them as separate elements. We concur with the Examiner's implied conclusion that a speaker who is speaking and a listener listening and repeating what is heard are not intractably combined as a singular element (Ans. 9). Appellants have not submitted evidence or arguments that their asserted combination is other than a matter of choice and not a matter dictated by immutable practice. We further concur with the Examiner's implied conclusion that known methods only are needed for combining a speaker with a listener repeating what is heard (*Id.*). With respect to predictability of results, Appellants have not provided evidence or argument identifying any unpredictable result from such combination. Accordingly, we are not persuaded by Appellants that the Examiner in this or other asserted instances improperly parsed claim elements.

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[8] Appellants' referenced element is "a listener who hears a speaker speaking items and then repeats aloud what is heard." The subject claim 1 verbatim recitation is "a human listener that hears a speaker who is repeating items and repeats aloud what is heard."

Appellants additionally argue that the Examiner uses improper hindsight to combine references (Reply Br. 5). Specifically, Appellants assert:

> It would not be appropriate to combine Kahn (a listener) with Rtischev (a speaker), as Rtischev teaches away from the participation of a human listener. Interposing a human listener between the Rtischev user and the Rtischev speech recognition system would only impede the language learning process of the user by separating the user's speech from the system. Additionally, though Baker, at col. 1, lines 13-20, describes a general desire for speech recognition technology, Baker also does not provide any motivation to combine it with Rtischev or Kahn. Neither passage explains how the references could, would, or should be combined with each other to form an intelligibility measurement system.

(Reply Br. 6). We are not persuaded by Appellants' argument that Rtischev teaches away from participation by a listener, because the Examiner, despite Appellants' argument, does not indicate that a Kahn listener is to be interposed between the Rtischev user, i.e., speaker, and the Rtischev speech recognition system. Instead, the Examiner indicates that Kahn teaches a listener hearing a speaker speaking items and then prepares a transcript of the heard speech (Ans. 9). Indeed, we find, based on a preponderance of the evidence of record, that Rtischev teaches a method and apparatus for evaluating the speaking capability of a person reading text aloud from a script so that a speech recognition prepared record of the speech can be compared with the script (FF 1 and 2). We further find Kahn teaches a method and system for a listener to manually prepare a transcription of what the listener perceives from hearing an audio file recording of a speaker speaking so that a comparison of the manually prepared transcription can be

evaluated against an automated prepared transcription (FF 3 and 4). What the Examiner indicates is that the Rtischev user speaking text from a script is combinable with the Kahn listener hearing speech, either live or from an audio file, in order to manually prepare a transcription for evaluation (Ans. 4-5). The Examiner reasons and provides underpinning support for so combining Rtischev and Kahn with the explanation that: "it would have been obvious to one of ordinary skill in the art of speech transcription to modify the teachings of Rtischev *et al* with operator [i.e., listener] based transcription and double-checking because it would advantageously allow for human interpretation of the audio file without tying time resources of the user [i.e., speaker] ... (Kahn et al, col. 1, lines 17-26)" (Ans. 5). The Examiner does not indicate that a Kahn listener is to be interposed between the Rtischev user and speech recognition system. Instead, the Examiner reasons Kahn suggests facilitating the Rtischev transcription with a human listener. We are persuaded by the Examiner's reasoning and stated underpinning support for the asserted combination of Rtischev and Kahn.

With respect to combining Rtischev and Kahn with Baker, the Examiner reasons that Baker teaches "automated speech recognition ... [to] advantageously speed up the recording process of the operator's [i.e., listener's] perceived translation (as opposed to typing the translation manually)... (Baker ..., col. 1 lines 13-20)" (Ans. 6). Appellants argue that "Baker ... does not provide any motivation to combine it with Rtischev or Kahn" (Reply Br. 6). We are not persuaded by Appellants' argument, because we concur with the Examiner concerning Baker teaching that machines capable of automating transcription of human dictation "would greatly increase the speed and ease with which humans could communicate

12

with computers, and greatly speed and ease the ability with which humans could record and organize their own words and thoughts" (FF 6). As indicated above, Kahn teaches a listener hearing a speaker's speech and manually transcribing what is heard. The Examiner reasons from Baker's teaching that automated transcription of human dictation, e.g., a listener repeating out loud what is heard, would greatly increase the speed and ease of transcription over the Kahn manual transcription. Therefore, the Examiner's reasoned motivation for combining Baker with Rtischev and Kahn is facilitating in a predictable way transcription by automation, and we are persuaded by this reasoning and underpinning support on the part of the Examiner.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's obviousness rejection of representative claim 1. Therefore, we will sustain the Examiner's rejection of that claim, and claims 2, 4-8, 11-18, 24, 26, 28, 29, 32, 33, 36, 37, 42, 44, and 45 that fall with claim 1.

Obviousness Rejection Based on Rtischev, Kahn, Baker, and Lewis

Regarding the obviousness rejection of claims 9, 10, 19-23, 34, 35, 38, 40, 41, and 43 (Ans. 7-8), we find that Appellants have not persuasively rebutted the Examiner's prima facie case of obviousness for these claims, but merely contended that the addition of Lewis fails to cure previously-noted deficiencies of Rtischev, Kahn, and Baker (App. Br. 16).

Once the Examiner satisfied the burden of presenting a prima facie case of obviousness, the burden shifts to Appellants to present evidence

and/or arguments that persuasively rebut the Examiner's prima facie case.[9] Since Appellants did not particularly point out errors in the Examiner's reasoning to persuasively rebut the Examiner's prima facie case of obviousness, the rejections therefore will be sustained.

CONCLUSIONS

Appellants have not shown that the Examiner erred in combining Rtischev, Kahn, and Baker under § 103 to arrive at the invention of representative claim 1, or of claims 2, 4-8, 11-18, 24, 26, 28, 29, 32, 33, 36, 37, 42, 44, and 45 that fall with claim 1. Nor have Appellants persuaded us of error in the Examiner's rejection of claims 9, 10, 19-23, 34, 35, 38, 40, 41, and 43 under § 103. In particular, Appellants have not shown the Examiner erred in the provided reasoning and rational underpinning to support the combination of references.

DECISION

The Examiner's decision rejecting all claims on appeal, i.e., claims 1, 2, 4-24, 26, 28, 29, 32-38, and 40-45, is affirmed.

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[9] *See Oetiker*, 977 F.2d at 1445.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

<u>AFFIRMED</u>

KIS

Matthew J. Sampson
McDonnell Boehnen Hulbert & Berghoff
32nd Floor
300 S. Wacker Drive
Chicago, IL 60606